

IN THE CLAIMS:

1. (Cancelled)

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Cancelled)

9. (Cancelled)

10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (Cancelled)

22. (Currently amended) An automatic transmission comprising:

a case;

a an input shaft rotatably driven input shaft by a drive source;

a first planetary gear unit mounted within said case and including first, second, third, and fourth rotary components;

reduced speed rotation output means for receiving input rotation from said input shaft, for reducing the speed of the input rotation and for outputting rotation at the reduced speed to said first rotary component, said reduced speed rotation output means comprising a speed reducing second planetary gear unit that has a reduced speed rotary element and an engaging component for controlling rotation of the reduced speed rotary element, wherein said reducing second planetary gear unit comprises an input rotary element that continuously receives input of the rotation of said input shaft, an intermediate element, and said reduced speed rotary element, said reduced speed rotary element being rotated at a reduced speed based on the rotation of said input rotary element and fixation against rotation of said intermediate element.

a first clutch that is engageable to connect ~~links~~ said input shaft and said second rotary component;

a second clutch that is engageable to connect said input shaft and said third rotary component;

an output unit for outputting the rotation of said fourth rotary component;

wherein said automatic transmission provides at least five forward speeds, one reverse speed, and a directly coupled state wherein the rotation of the input shaft is output without change in speed by engagement of said first clutch and said second clutch in fifth

speed and higher;

wherein said reduced speed rotation output means is located on one axial side of said first planetary gear unit, and said output unit is located between said first planetary gear unit and said reduced speed rotation output means; and

wherein said first clutch and said second clutch are located on the axial side of said first planetary gear unit opposite said one axial side;

wherein said engaging component is a third clutch that selectively connects said reduced speed rotary element and said first rotary component;

wherein said third clutch is located on the axial side of said speed reducing second planetary gear unit opposite said first planetary gear unit;

wherein said third clutch comprises a third hydraulic servo, friction members, a drum unit that is constructed integrally with said third hydraulic servo and opens toward said speed reducing second planetary gear unit, and a hub unit; and

wherein the third hydraulic servo is disposed on a boss extending from the case, and oil is supplied to said third hydraulic servo from an oil path in said boss.

23. (Canceled)

24. (Currently amended) An automatic transmission according to Claim 22 23, wherein said third engaging component engages in said first speed forward.

25. (Canceled)

26. (Canceled)

27. (Cancelled)

28. (Currently amended) An automatic transmission according to Claim 42, ~~27~~, wherein said third clutch comprises a third hydraulic servo, friction members, a drum unit that is constructed integrally with said third hydraulic servo, and a hub unit;

wherein said hub unit is linked with said input rotary element; and  
and wherein said drum unit is linked to said input shaft and is positioned so as to open toward said speed reducing second planetary gear unit.

29. (Previously presented) An automatic transmission according to Claim 28, wherein said third hydraulic servo is mounted on said input shaft; and  
wherein oil is supplied to said third hydraulic servo via an oil path within said input shaft.

30. (Previously presented) An automatic transmission according to Claim 28, wherein said third hydraulic servo is mounted on a boss extending from the case; and  
oil is supplied to said third hydraulic servo via an oil path provided within said boss.

31. (Canceled)

32. (Canceled)

33. (Currently amended) An automatic transmission according to Claim 22, wherein said first clutch is engaged engages in said one reverse first speed reverse.

34. (Currently amended) An automatic transmission according to Claim 33, wherein:

    said first clutch is located adjoining said first planetary gear unit;

    said first clutch comprises first friction members and a first hydraulic servo that causes said first friction members to engage and disengage, and a first drum unit and a first hub unit that are constructed integral with said first hydraulic servo;

    said first drum unit is linked with said input shaft, and said first hub unit is linked with said second rotary component;

    said second clutch is located on the axial side of said speed reducing second planetary gear unit opposite said first clutch;

    said second clutch comprises second friction members, a second hydraulic servo that selectively engages said second friction members, and a second drum unit and a second hub unit that are constructed integral with said second hydraulic servo; and

    said second drum unit is linked with said input shaft, and said second hub unit is linked with said third rotary component.

35. (Previously presented) An automatic transmission according to Claim 34, further comprising:

    a first brake for fixing said second rotary component against rotation;

    a second brake for fixing said third rotary component against rotation;

    wherein said first brake is located radially outward of said first clutch; and

wherein said second brake is located radially outward of said first planetary gear unit.

36. (Previously presented) An automatic transmission according to Claim 35, wherein said first brake comprises friction members and a hydraulic servo; wherein the hydraulic servo of said first brake is located radially outward of and at least partially axially overlapping said first hydraulic clutch; and wherein the friction members of said first brake are splined to the case and to the first hub unit.

37. (Previously presented) An automatic transmission according to Claim 36, wherein said second brake comprises friction members and a hydraulic servo; wherein the hydraulic servo of said second brake is formed in a wall of the case extending radially inward and rotatably supporting said output member; and wherein the friction members of said second brake are located radially outward of said first planetary gear unit.

38. (Currently amended) An automatic transmission according to Claim 22, wherein a transmitting member links (1) the reduced speed rotary element of said speed reducing second planetary gear unit or said ~~third~~ engaging component and (2) the first rotary element of said first planetary gear unit, said transmitting member including an axially extending portion radially inward of said output unit.

39. (Canceled)

40. (Currently amended) An automatic transmission according to Claim 22, wherein said first planetary gear unit is a multiple type planetary gear unit comprising a first sun gear, a long pinion which meshes with said first sun gear, a short pinion which meshes with said long pinion, a carrier for rotationally supporting said long pinion and said short pinion, a second sun gear meshing with said short pinion, and a ring gear meshing with said long pinion;

wherein said first rotary component is said second sun gear which receives the reduced speed rotation of said reduced speed rotation output means;

wherein said second rotary component is said first sun gear which receives input of rotation from said input shaft when said first clutch is engaged, and which is fixed against rotation by engagement of a said first brake;

wherein said third rotary component is said carrier which receives input of rotation of said input shaft when said second clutch is engaged, and which is fixed against rotation by engagement of a second brake; and

wherein said fourth rotary component is said ring gear linked to said output member.

41. (Currently amended) An automatic transmission according to Claim 40, wherein, in first speed forward, reduced speed rotation is input to said first rotary component from said reduced speed rotation output means, and said second brake is engaged;

wherein, in second speed forward, reduced speed rotation is input to said first rotary

component from said reduced speed rotation output means, and said first brake is engaged;

wherein, in third speed forward, reduced speed rotation is input to said first rotary component from said reduced speed rotation output means, and said first clutch is engaged;

wherein, in fourth speed forward, reduced speed rotation is input to said first rotary component from said reduced speed rotation output means, and said second clutch is engaged;

wherein, in fifth speed forward, said first clutch and said second clutch are both engaged;

wherein, in sixth speed forward, said second clutch and said first brake are engaged; and

wherein, in said one reverse first speed reverse, said first clutch and said second brake are engaged;

whereby said automatic transmission provides six forward speeds and one reverse speed.

42. (New) An automatic transmission comprising:

a rotatably driven input shaft;  
a first planetary gear unit including first, second, third, and fourth rotary components;  
reduced speed rotation output means for receiving input rotation from said input shaft, for reducing the speed of the input rotation and for outputting rotation at the reduced speed to said first rotary component, said reduced speed rotation output means comprising

a speed reducing second planetary gear unit that comprises a reduced speed rotary element, an engaging component for controlling rotation of the reduced speed rotary element, an input rotary element that receives input of the rotation of said input shaft, and an intermediate element, said reduced speed rotary element being rotatable at a reduced speed based on the rotation of said input rotary element and fixation against rotation of said intermediate element;

a first clutch that is engageable to connect said input shaft and said second rotary component;

a second clutch that is engageable to connect said input shaft and said third rotary component;

an output unit for outputting the rotation of said fourth rotary component;

wherein said automatic transmission provides at least five forward speeds, one reverse speed, and a directly coupled state wherein the rotation of the input shaft is output without change in speed by engagement of said first clutch and said second clutch in fifth speed;

wherein said reduced speed rotation output means is located on one axial side of said first planetary gear unit, and said output unit is located between said first planetary gear unit and said reduced speed rotation output means;

wherein said first clutch and said second clutch are located on the axial side of said first planetary gear unit opposite said one axial side; and

wherein said engaging component is a third clutch that selectively connects said reduced speed rotary element and said first rotary component.

43. (New) An automatic transmission comprising:

a rotatably driven input shaft;

a first planetary gear unit including first, second, third, and fourth rotary components;

reduced speed rotation output means for receiving input rotation from said input shaft, for reducing the speed of the input rotation and for outputting rotation at the reduced speed to said first rotary component, said reduced speed rotation output means comprising a speed reducing second planetary gear unit that comprises a reduced speed rotary element, an engaging component for controlling rotation of the reduced speed rotary element, an input rotary component that receives as input the rotation of said input shaft, and a carrier, said reduced speed rotary element being rotatable at a reduced speed based on the rotation of said input rotary element and fixation against rotation of said intermediate element;

a first clutch that is engageable to connect said input shaft and said second rotary component;

a second clutch that is engageable to connect said input shaft and said third rotary component;

an output unit for outputting the rotation of said fourth rotary component;

wherein said automatic transmission provides at least five forward speeds, one reverse speed, and a directly coupled state wherein the rotation of the input shaft is output without change in speed by engagement of said first clutch and said second clutch in fifth speed;

wherein said reduced speed rotation output means is located on one axial side of said first planetary gear unit, and said output unit is located between said first planetary

gear unit and said reduced speed rotation output means;

wherein said first clutch and said second clutch are located on the axial side of said first planetary gear unit opposite said one axial side; and

wherein said engaging component is a brake for fixing the intermediate element against rotation.

44. (New) An automatic transmission according to claim 43 wherein:

said brake is on the axial side of said first planetary gear unit opposite said speed reducing second planetary gear unit; and

said brake is operated by a hydraulic servo formed in a wall of a case housing said first planetary gear unit.

45. (New) An automatic transmission comprising:

a rotatably driven input shaft;

a multiple type planetary gear unit comprising a first sun gear, a long pinion which meshes with said first sun gear, a short pinion which meshes with said long pinion, a carrier for rotatably supporting said long pinion and said short pinion, a second sun gear meshing with said short pinion, and a ring gear meshing with said long pinion;

reduced speed rotation output means for receiving input rotation from said input shaft, for reducing the speed of the input rotation and for outputting rotation at the reduced speed to said second sun gear;

a first clutch that is engageable to connect said input shaft and said first sun gear;

a second clutch that is engageable to connect said input shaft and said carrier;

an output unit for outputting the rotation of said ring gear;

wherein said automatic transmission provides at least five forward speeds, one reverse speed, and a directly coupled state wherein the rotation of the input shaft is output without change in speed by engagement of said first clutch and said second clutch in fifth speed;

wherein said reduced speed rotation output means is located on one axial side of said planetary gear unit, and said output unit is located between said planetary gear unit and said reduced speed rotation output means;

wherein said first clutch and said second clutch are located on the axial side of said planetary gear unit opposite said one axial side;

wherein said second sun gear receives the reduced speed rotation of said reduced speed rotation output means;

wherein said first sun gear receives input of rotation from said input shaft when said first clutch is engaged, and is fixed against rotation by engagement of a first brake;

wherein said carrier receives input of rotation of said input shaft when said second clutch is engaged, and is fixed against rotation by engagement of a second brake; and

wherein said ring gear is linked to said output member.